

APPENDIX D

POSTDEMOLITION SOIL MONITORING PROTOCOL

During site demolition activities, field crews will provide soil quality monitoring during building slab removal and/or other construction activities that expose soil, such as subsurface utility removal. The purpose of this phase of soil monitoring is two fold:

1. Confirm the previous delineation of areas of concern (AOCs) with visual observations, and
2. Identify previous unknown AOCs that may be beneath structures or within utility corridors.

D.1 FIELD INVESTIGATION

Protocol for postdemolition soil monitoring is based on visual observation of evidence of soil impacts as well as field monitoring of surface soil. Figure D-1 presents a flowchart for the postdemolition soil monitoring process. This protocol assumes that the areas under investigation are clean, but the sampling is conducted in a somewhat untargeted, and random way in order to provide evidence to confirm or refute this hypothesis. This is an example of Boeing Realty Company's (BRC's) efforts to address soil impacts at the facility in a comprehensive manner. Field crews will conduct walking transects and make visual observations as buildings, foundations, utilities, and other structures are removed and the underlying soil is exposed. Photoionization detector (PID) headspace vapor monitoring will also be conducted on an approximate 50-foot grid across the newly exposed portions of the site.

If previously unknown soil impacts are observed and have the potential of exceeding the Field Action Levels (FALs) or require removal, the impacted area will be exposed with a backhoe to approximately 5 feet below ground surface (bgs). If visual impacts extend below 5 feet, the area will be classified as an AOC and a more comprehensive investigation will be scheduled. The investigation will include advancing a soil boring to estimate the depth of impact. If visual impacts extend less than 5 feet bgs and the soil can be immediately removed, the soils will be excavated and segregated in accordance with the Solid Waste Management Plan (SWMP). If the soil cannot be immediately removed, the location will be marked and will be subsequently addressed in accordance

with the SWMP. Confirmation soil samples will be collected from the base and sidewalls of the excavation. If the confirmation soil samples are below FALs or meet the requirements of the risk assessment, the data will be filed with the Project Data Manager and the case will be considered closed.

The collective professional judgment of the Field Team, Program Leaders, and BRC representatives will be used to evaluate each postdemolition soil impact area found. Each impact area found, however, will be marked and observations will be recorded for inclusion in the report.

For areas with no visual impact but elevated PID readings, the head-space grid size around the impacted area will be reduced and resampled to better define the lateral limits of the soil impact. If the impacted area (as measured by headspace PID readings) has the potential of exceeding FALs or requiring removal, the location will be exposed with a backhoe (as above) to approximately 5 feet bgs. If significant PID impacts extend below 5 feet, then the location will be classified as a new AOC and scheduled for a more comprehensive investigation using a soil boring to characterize the depth of impact. Soil samples will be collected as needed to define the vertical limits of soil impact.

Alternatively, if PID-measured impacts extend less than 3 feet bgs, soils will simply be excavated and segregated in accordance with the SWMP as discussed above. Excavation confirmation soil samples will be analyzed for constituents historically used in the area. If historical chemical use is unknown, soil samples will be analyzed for VOCs and petroleum hydrocarbons.

If impacts are found and are not covered by the criteria presented above, BRC and the Los Angeles Regional Water Quality Control Board (LARWQCB) will be notified and a customized response will be prepared so that a field sampling strategy can be quickly developed and implemented.

When all data from the postdemolition monitoring effort are available from the laboratory, it will be confirmed that the Project Data Manager has also received the data. If any new AOCs have been defined during slab-removal soil monitoring, the data will be evaluated to assess whether soil impacts at the new AOCs exceed the FALs or requirements of the risk assessment. If no constituents are found to be above their respective FALs, then the field investigation for the new AOC will be complete.

However, if FALs or risk assessment criteria are exceeded, the available data will be interpreted to evaluate if the zone of soil impact that exceeds FALs or risk assessment criteria at the new AOC has been delineated. If the zone of soil impact has been adequately delineated, the field investigation for the new AOC will be complete.

If the impacted area has not been adequately delineated, then a supplemental soil investigation for the new AOC in accordance with the procedure discussed above for AOC revisits will be scheduled.

D.2 POSTDEMOLITION SOIL INVESTIGATION REPORT

As demolition and slab removal progresses across the site, a Postdemolition Soil Inspection and Investigation Report will be prepared to document observations and findings from soil investigations conducted during and after slab removal.

The postdemolition reports will include tables summarizing the results and will include citations to the Project Environmental Data Management System (EDMS) to direct the reader to electronic versions of the complete set of analytical results. The report will also include maps showing locations of samples and interpretation of the extent of contamination discovered during demolition and slab removal soil monitoring. The report will also present the data and results of any soil excavated during the postdemolition soil monitoring effort.

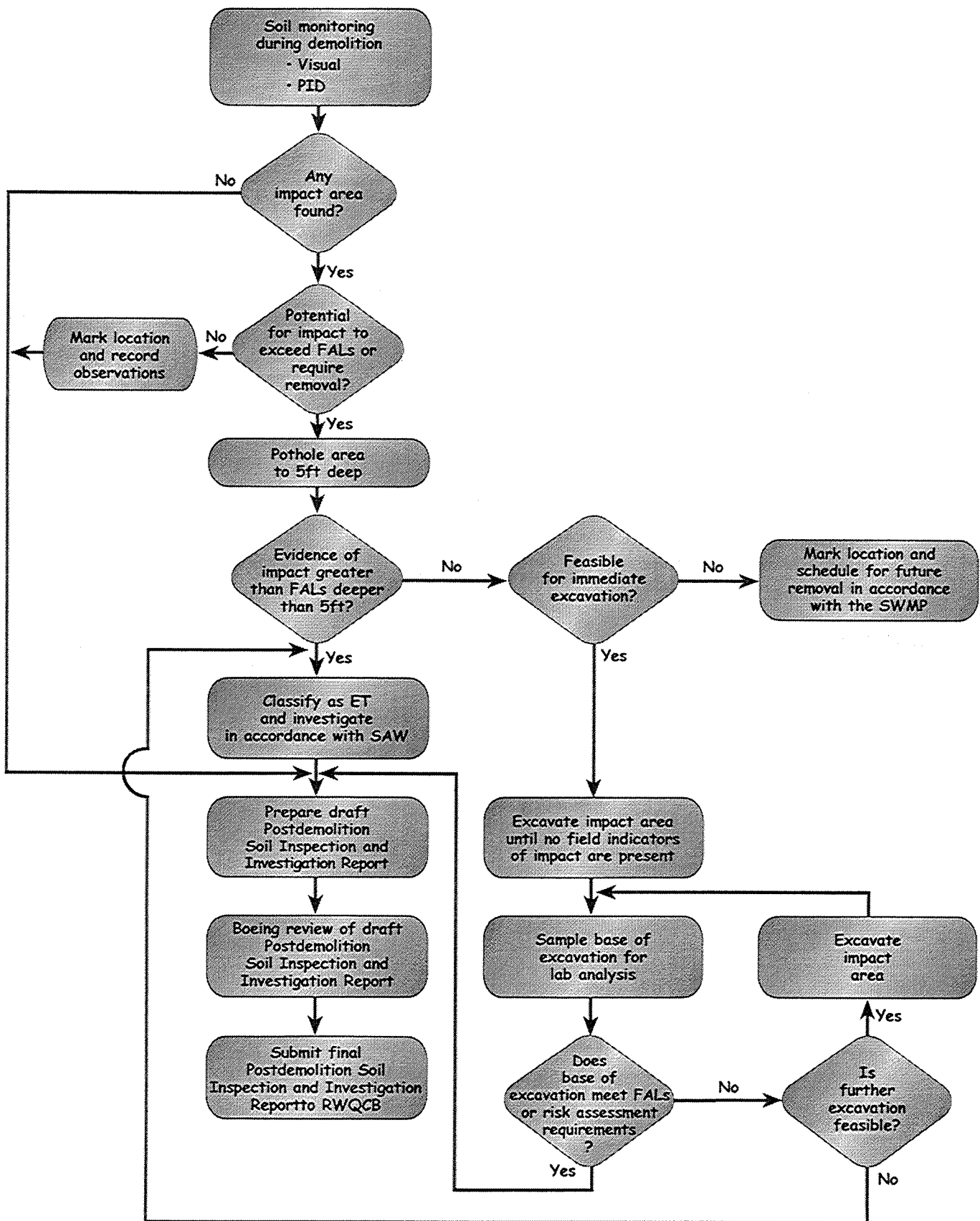


Figure D-1. Flowchart
Postdemolition Soil Monitoring